

CLAIM AMENDMENTS

The listing of claims will replace all prior versions and listings of claims in the application.

1. (Currently Amended) A data processing device, comprising an electronic memory component, the data processing device comprising:

~~at least two access-secured sub-areas, each having at least one assigned part of a parameter comprising at least one bit, the device configured such that an encryption method is applied to fewer than all of said sub-areas; and~~

an encryption block, ~~wherein said encryption block receives~~ an address comprised of a series of parameters a_0, \dots, a_n and applying an encryption method on at least one assigned part of said parameter from at least one of said sub-areas and encrypts said part of said parameter to produce an encrypted series of parameters a'_0, \dots, a'_n according to the series:

$$a'_j = \begin{cases} f_{n-j+1}(a_j) & j = n \\ f_{n-j+1}(a_j + f_{n-j}(a_{j+1})) & j = 0, \dots, n-1 \end{cases}$$

wherein encryption function f_{j+1} and encryption function f_j are distinct for all values of j , and

for at least a first parameter in said series of parameters, $a'_x \neq a_x$, and for at least a second parameter in said series of parameters, $a'_y = a_y$.

2-3. (Canceled)

4. (Previously Presented) The data processing device as claimed in claim 1, wherein the memory component comprises:

an erasable programmable read only memory,
an electrically erasable programmable read only memory or
a flash memory.

5. (Canceled)

6. (Currently Amended) A method of securing access to an electronic memory, comprising:

receiving, by a data processing device, an address comprised of a series of parameters a_0, \dots, a_n , ~~wherein the parameter is comprised of at least two parts, each part comprising at least one bit;~~

~~assigning, by said data processing device, said parts of the parameter into at least two access-secured sub-areas located in said data processing device; and~~

encrypting, by said data processing device, at least one of said parts of the parameters in said access-secured sub-areas with an encryption method, ~~wherein said encryption method is applied to fewer than all of said sub-areas to produce an encrypted series of parameters a'_0, \dots, a'_n according to the series:~~

$$a'_j = \begin{cases} f_{n-j+1}(a_j) & j = n \\ f_{n-j+1}(a_j + f_{n-j}(a_{j+1})) & j = 0, \dots, n-1 \end{cases}$$

wherein encryption function f_{j+1} and encryption function f_j are distinct for all values of j , and

for at least a first parameter in said series of parameters, $a'_x \neq a_x$ and for at least a second parameter in said series of parameters, $a'_y = a_y$.

7. (Canceled)

8. (Currently Amended) The method as claimed in ~~claim 7~~ claim 6, characterized in that the function is one-to-one, according to the equation
$$a'_0 = f_{n+1} \left(a_0 + f_n \left(a_1 + f_{n-1} \left(a_2 + \dots + f_1(a_n) \right) \right) \right).$$

9. (Canceled)

10. (Currently Amended) ~~The~~ A data processing device of claim 1, comprising an ~~electronic memory component, comprising:~~
at least two access secured sub-areas, each having at least one assigned part of a parameter comprising at least one bit, the device configured such that an encryption method is applied to fewer than all of said sub-areas, wherein the data processing device is utilized in at least one of:

a one smart card controller,

a reader integrated circuit,

a cryptography chipset, or

for application in at least one of audio or video encryption.

11-16. (Canceled)